



MICA (J-12C): sc-80189

BACKGROUND

MICA and MICB are stress induced antigens that are related to major histocompatibility complex (MHC) class I molecules. MICA and MICB are frequently expressed in epithelial tumors. These highly glycosylated cell surface proteins are stably expressed without conventional class I peptide ligands or association with β -2-Microglobulin. The expression is induced on proliferating or heat shock stressed epithelial cells. MICA and MICB are broadly recognized by intestinal epithelial V δ 1 $\gamma\delta$ T cells expressing variable TCRs, suggesting that these antigens may play a central role in the signaling of cellular distress to evoke immune responses in the intestinal epithelium.

REFERENCES

1. Bahram, S., Bresnahan, M., Geraghty, D.E. and Spies, T. 1994. A second lineage of mammalian major histocompatibility complex class I genes. *Proc. Natl. Acad. Sci. USA* 91: 6259-6263.
2. Bahram, S., Mizuki, N., Inoko, H. and Spies, T. 1996. Nucleotide sequence of the human MHC class I MICA gene. *Immunogenetics* 44: 80-81.
3. Bahram, S., Shiina, T., Oka, A., Tamiya, G. and Inoko, H. 1996. Genomic structure of the human MHC class I MICB gene. *Immunogenetics* 45: 161-162.
4. Groh, V., Bahram, S., Bauer, S., Herman, A., Beauchamp, M. and Spies, T. 1996. Cell stress-regulated human major histocompatibility complex class I gene expressed in gastrointestinal epithelium. *Proc. Natl. Acad. Sci. USA* 93: 12445-12450.
5. Groh, V., Steinle, A., Bauer, S. and Spies, T. 1998. Recognition of stress-induced MHC molecules by intestinal epithelial $\gamma\delta$ T cells. *Science* 279: 1737-1740.
6. Steinle, A., Groh, V. and Spies, T. 1998. Diversification, expression and $\gamma\delta$ T cell recognition of evolutionarily distant members of the MIC family of major histocompatibility complex class I-related molecules. *Proc. Natl. Acad. Sci. USA* 95: 12510-12515.
7. Groh, V., Rhinehart, R., Secrist, H., Bauer, S., Grabstein, K.H. and Spies, T. 1999. Broad tumor-associated expression and recognition by tumor-derived $\gamma\delta$ T cells of MICA and MICB. *Proc. Natl. Acad. Sci. USA* 96: 6879-6884.

CHROMOSOMAL LOCATION

Genetic locus: MICA (human) mapping to 6p21.3.

STORAGE

For immediate and continuous use, store at 4° C for up to one month. For sporadic use, freeze in working aliquots in order to avoid repeated freeze/thaw cycles. If turbidity is evident upon prolonged storage, clarify solution by centrifugation.

PROTOCOLS

See our web site at www.scbt.com or our catalog for detailed protocols and support products.

SOURCE

MICA (J-12C) is a mouse monoclonal antibody raised against BaF/3 cells transfected with MICA of human origin.

PRODUCT

Each vial contains 100 μ g IgG_{2b} in 1.0 ml of PBS with < 0.1% sodium azide and protein stabilizer.

Available azide-free for blocking, sc-80189 L, 100 μ g/0.1 ml.

APPLICATIONS

MICA (J-12C) is recommended for detection of MICA of human origin by Western Blotting (starting dilution 1:200, dilution range 1:100-1:1000) and flow cytometry (1 μ g per 1 x 10⁶ cells); non cross-reactive with MICB.

Suitable for use as control antibody for MICA siRNA (h): sc-42924.

Molecular Weight of MICA: 62 kDa.

Positive Controls: HeLa whole cell lysate: sc-2200.

RECOMMENDED SECONDARY REAGENTS

To ensure optimal results, the following support (secondary) reagents are recommended: 1) Western Blotting: use goat anti-mouse IgG-HRP: sc-2005 (dilution range: 1:2000-1:32,000) or Cruz Marker™ compatible goat anti-mouse IgG-HRP: sc-2031 (dilution range: 1:2000-1:5000), Cruz Marker™ Molecular Weight Standards: sc-2035, TBS Blotto A Blocking Reagent: sc-2333 and Western Blotting Luminol Reagent: sc-2048.

RESEARCH USE

For research use only, not for use in diagnostic procedures.